

7. Jamieson Landscape Zone



7. Jamieson Landscape Zone

7.1 Jamieson Landscape Zone description

The Jamieson Landscape Zone is bounded to the east and south by the transition from the Victorian Alps bioregion to the Highlands - Southern Fall bioregion. To the west, the boundary runs along the edge of the Victorian Alps bioregion at Lake Mountain (in Buxton Landscape Zone) and to the north, it follows the Central Victorian Uplands / Highlands - Northern Fall bioregion interface between the Big River near Jamieson, across towards Tolmie. The area is recognized as being part of the Taungurong (Daung Warrung) Aboriginal tribe/language group, with the current administrative boundaries including the Camp Jungai Co-operative Ltd., Central Gippsland Aboriginal Health and Housing Co-operative Ltd., Coranderrk Koori Co-operative Ltd. and Wurundjeri Tribe Land Compensation and Cultural Heritage Council Inc. (Map 15). Benalla Rural City and Mansfield Shire overlay the zone (Map 14).

The Highlands - Northern Fall bioregion forms the majority of the zone's bioregion, with the Victorian Alps bioregion occurring generally from the eastern and southern boundaries at the Alpine National Park, Mount Buller and Mount Stirling in the north, Mount Skene in the east and the steeply dissected ranges of the Matlock Mountains extending northwards from Matlock to Ten Mile. Many of the pre-1750 EVCs are still represented in the Jamieson Landscape Zone, largely due to the rugged terrain of the alpine environment seen in the State Forest and the Alpine National Park (Maps 28, 29 and 32). Shrubby Dry Forest, Herb-rich Foothill Forest, Grassy Dry Forest and Damp Forest dominate the foothills throughout Jamieson and east to the Alpine National Park. In the south-west of the zone north of Shaw, Riparian Forests of the Big River and its tributaries, Herb-rich Foothill Forest and Damp Forest dominate with small patches of Shrubby Foothill Forest. The sub-alpine areas are characterised by Montane Dry Woodland and Montane Damp Forest. As altitude increases, Subalpine Woodland and Treeless Subalpine Mosaic are prominent and suffer disturbance/modification in the vicinity of Mount Stirling and Mount Buller Alpine Resorts. Heathy Dry Forest becomes more dominant in the centre of the zone near Knockwood between the alpine areas of Mount Skene and the Matlock Mountains.

Jamieson Landscape Zone has very high biodiversity values and contains the only major representation of alpine biodiversity within the Goulburn Broken CMA. The Spotted Tree Frog occurs throughout the zone, including within the Taponga River catchment, upstream of the Big River confluence (Quin 1991), the North Branch of the Jamieson River upstream of confluence with Jamieson River South Branch, Jamieson River catchment and at the Howqua River Heritage River upstream of the Eight Mile Creek confluence (Map 34). Stanley and Bindaree Creeks off the Howqua River supports the Barred Galaxias (S. Smith pers. comm.). The Warty Bell Frog is also known from the Goulburn floodplain as far upstream as Jamieson (Graeme Gillespie, pers. comm.). Leadbeater's Possum are widely recorded from Ash forests on public land and the Mountain Pygmy Possum occurs in the Victorian Alps at Mount Buller. Quin's (1991) study at the Black River/Upper Goulburn and Big River recorded both the Squirrel Glider and the Endangered Smoky Mouse.

Threats occurring in the Jamieson Landscape Zone include future Alpine Resort development such as infrastructure development, disruption of natural flows and hydrology, clearing for additional ski-runs and slope grooming. Waste water disposal affecting river health is also an issue at the Alpine Resorts. Introduced weeds are impacting the fragile alpine vegetation at Mount Buller and conflicts exist between hardwood production and wildlife conservation in forest blocks. The Purple Eyebright population near Wrens Flat (only one of four populations in Victoria) occurs mostly within a road drain and batter and is at risk if inadvertently graded.

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7.1 Jamieson Landscape Zone description (cont'd)

Table 20. Total area of pre-1750 and extant EVCs in the Jamieson Landscape zone, within the Highlands - Northern Fall bioregion

| EVC Group | EVC # | EVC Bioregional Conservation Status | EVC Name | Pre-1750 Area (ha) | Current Area (ha) |
|-----------|-------|-------------------------------------|--|--------------------|-------------------|
| 6 | 23 | LC | Herb-rich Foothill Forest | 74364 | 70505 |
| 6 | 21 | LC | Shrubby Dry Forest | 36824 | 29052 |
| 7 | 29 | LC | Damp Forest | 32797 | 32670 |
| 6 | 20 | LC | Heathy Dry Forest | 10830 | 10757 |
| 9 | 18 | LC | Riparian Forest | 9106 | 8237 |
| 7 | 30 | LC | Wet Forest | 5105 | 5080 |
| 6 | 22 | LC | Grassy Dry Forest | 3796 | 10566 |
| 11 | 36 | LC | Montane Dry Woodland | 3296 | 3296 |
| 7 | 38 | LC | Montane Damp Forest | 1156 | 1156 |
| 6 | 47 | E | Valley Grassy Forest | 998 | 252 |
| 6 | 45 | D | Shrubby Foothill Forest | 916 | 916 |
| 5 | 175 | D | Grassy Woodland | 448 | 148 |
| 7 | 39 | LC | Montane Wet Forest | 242 | 242 |
| 9 | 84 | D | Riparian Forest/Swampy Riparian Woodland/Riparian Shrubland/Riverine Escarpment Scrub/Disturbed Mosaic | 231 | 88 |
| 10 | 31 | V | Cool Temperate Rainforest | 202 | 203 |
| 7 | 201 | LC | Shrubby Wet Forest | 104 | 105 |
| 8 | 83 | LC | Swampy Riparian Woodland | 79 | 50 |
| 14 | 55 | E | Plains Grassy Woodland | 60 | 0 |
| 2 | 48 | D | Heathy Woodland | 37 | 37 |
| 8 | 41 | LC | Montane Riparian Thicket | 24 | 24 |
| | | | TOTAL | 180616 | 173381 |
| 99 | 58 | NA | Cleared Severely Disturbed | 0 | 1015 |
| 99 | 987 | NA | Plantation (undefined) | 0 | 177 |
| 99 | 997 | NA | Private Land No Tree Cover | 0 | 4588 |
| 99 | 998 | NA | Water Body - Natural or man made | 0 | 1456 |

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7.1 Jamieson Landscape Zone description (cont'd)

Table 21. Total area of pre-1750 and extant EVCs in the Jamieson Landscape zone, within the Victorian Alps bioregion

| EVC Group | EVC # | EVC Bioregional Conservation Status | EVC Name | Pre-1750 Area (ha) | Current Area (ha) |
|-----------|-------|-------------------------------------|---|--------------------|-------------------|
| 11 | 36 | LC | Montane Dry Woodland | 28170 | 28170 |
| 7 | 38 | LC | Montane Damp Forest | 19766 | 19501 |
| 12 | 43 | LC | Sub-alpine Woodland | 7541 | 7512 |
| 6 | 23 | LC | Herb-rich Foothill Forest | 2464 | 2457 |
| 7 | 29 | LC | Damp Forest | 2364 | 2364 |
| 7 | 39 | LC | Montane Wet Forest | 1929 | 1922 |
| 7 | 30 | LC | Wet Forest | 1330 | 1330 |
| 12 | 44 | V | Treeless Sub-alpine Mosaic | 918 | 862 |
| 6 | 21 | LC | Shrubby Dry Forest | 807 | 804 |
| 9 | 18 | LC | Riparian Forest | 141 | 141 |
| 8 | 41 | LC | Montane Riparian Thicket | 81 | 81 |
| 6 | 20 | LC | Heathy Dry Forest | 49 | 49 |
| 21 | 73 | R | Rocky Outcrop Shrubland/Herbland Mosaic | 22 | 22 |
| 7 | 201 | LC | Shrubby Wet Forest | 9 | 9 |
| 8 | 83 | V | Swampy Riparian Woodland | 9 | 9 |
| 10 | 31 | R | Cool Temperate Rainforest | 3 | 3 |
| 11 | 192 | LC | Montane Rocky Shrubland | 2 | 2 |
| 7 | 35 | LC | Tableland Damp Forest | 1 | 1 |
| 6 | 22 | LC | Grassy Dry Forest | 0 | 2 |
| | | | TOTAL | 65607 | 65242 |
| 99 | 58 | NA | Cleared Severely Disturbed | 0 | 91 |
| 99 | 997 | NA | Private Land No Tree Cover | 0 | 274 |

Table 22. Total area and number of current EVCs in each conservation status in the Jamieson Landscape zone.

| EVC Bioregional Conservation Status | Hectares (HNF) | Number of EVCs (HNF) | Hectares (VA) | Number of EVCs (VA) |
|-------------------------------------|----------------|----------------------|---------------|---------------------|
| Endangered | 252 | 1 | 0 | 0 |
| Vulnerable | 185 | 1 | 871 | 2 |
| Depleted | 1189 | 4 | 0 | 0 |
| Rare | 0 | 0 | 25 | 2 |
| Least Concern | 170120 | 13 | 64349 | 15 |

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7.1 Jamieson Landscape Zone description (cont'd)

Table 23. List of current threatened flora the Jamieson Landscape Zone (NRE 2002c* & SAC 2002# and EA 2003*).

| Latin Name | Common Name | Australian Status [♦] | Victorian Status [*] | FFG Act [#] | Recovery Plan [♦] | Action Statement No. [*] | BNA Unassessed (HNF) | BNA Unassessed (VA) | Species No. |
|--|-------------------------------|--------------------------------|-------------------------------|----------------------|----------------------------|-----------------------------------|----------------------|---------------------|-------------|
| <i>Lachnagrostis meionectes</i> | Alpine Blown-grass | | r | | | | Un | Un | 156 |
| <i>Colobanthus affinis</i> | Alpine Colobanth | | r | | | | Un | Un | 793 |
| <i>Grammitis poeppigiana</i> | Alpine Finger-fern | | r | | | | Un | Un | 1521 |
| <i>Phebalium squamulosum ssp. alpinum</i> | Alpine Phebalium | | r | | | | Un | Un | 4815 |
| <i>Austrostipa nivicola</i> | Alpine Spear-grass | | r | | | | Un | Un | 3284 |
| <i>Trachymene humilis ssp. breviscapa</i> | Alpine Trachymene | | r | | | | Un | Un | 5003 |
| <i>Westringia senifolia</i> | Alpine Westringia | | r | | | | Un | Un | 3572 |
| <i>Thesium australe</i> | Austral Toad-flax | Vul | v | L | | 56 | | | 3389 |
| <i>Poa sp. aff. gunnii</i> | Avon Tussock-grass | | r | | | | Un | Un | 4510 |
| <i>Pomaderris helianthemifolia ssp. minor</i> | Blunt-leaf Pomaderris | | r | | | | Un | Un | 5428 |
| <i>Cystopteris tasmanica</i> | Brittle Bladder-fern | | r | | | | Un | Un | 944 |
| <i>Euchiton umbricola</i> | Cliff Cudweed | | r | | | | Un | Un | 1475 |
| <i>Pterostylis grandiflora</i> | Cobra Greenhood | | r | | | | Un | Un | 2798 |
| <i>Asplenium trichomanes</i> | Common Spleenwort | | r | | | | Un | Un | 294 |
| <i>Prostanthera decussata</i> | Dense Mint-bush | | r | | | | Un | Un | 2739 |
| <i>Ranunculus eichlerianus</i> | Eichler's Buttercup | | r | X | | | Un | Un | 2888 |
| <i>Huperzia australiana</i> | Fir Clubmoss | | r | | | | Un | Un | 1709 |
| <i>Isolepis montivaga</i> | Fog Club-sedge | | r | | | | Un | Un | 1781 |
| <i>Gynatrix macrophylla</i> | Gippsland Hemp Bush | | r | | | | Un | Un | 3756 |
| <i>Pomaderris aurea</i> | Golden Pomaderris | | r | | | | Un | Un | 2651 |
| <i>Craspedia jamesii</i> | Green Billy-buttons | | r | | | | Un | Un | 4647 |
| <i>Ranunculus gunniamus</i> | Gunn's Alpine Buttercup | | r | | | | Un | Un | 2892 |
| <i>Euphrasia lasianthera</i> | Hairy Eyebright | | r | | | | Un | Un | 1342 |
| <i>Lepyrodon lagurus</i> | Hare's-foot Pincushion-moss | | r | | | | Un | Un | 6433 |
| <i>Acacia penninervis var. penninervis</i> | Hickory Wattle | | r | | | | Un | Un | 74 |
| <i>Pultenaea williamsonii</i> | Highland Bush-pea | | r | | | | Un | Un | 4863 |
| <i>Leptorhynchus elongatus</i> | Lanky Buttons | | e | | | | Un | Un | 1941 |
| <i>Trochocarpa clarkei</i> | Lilac Berry | | r | | | | Un | Un | 3463 |
| <i>Eucalyptus kybeanensis</i> | Mallee Ash | | r | | | | Un | Un | 1291 |
| <i>Euchiton traversii</i> | Mat Cudweed | | r | | | | Un | Un | 1474 |
| <i>Scleranthus singuliflorus</i> | Mossy Knawel | | r | | | | Un | Un | 3064 |
| <i>Chiloglottis jeansii</i> | Mountain Bird-orchid | | r | | | | Un | Un | 4499 |
| <i>Craspedia sp. 1</i> | Mountain Forest Billy-buttons | | r | | | | Un | Un | 4641 |
| <i>Schizacme montana var. montana</i> | Mountain Mitrewort | | r | | | | Un | Un | 2208 |
| <i>Chionogentias muelleriana ssp. willisiana</i> | Mt Buller Snow-gentian | | r | | | | Un | Un | 4764 |
| <i>Agrostis muelleriana</i> | Mueller's Bent | | r | | | | Un | Un | 157 |
| <i>Olearia speciosa</i> | Netted Daisy-bush | | k | | | | Un | Un | 2326 |

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7.1 Jamieson Landscape Zone description (cont'd)

Table 23. List of current threatened flora the Jamieson Landscape Zone (NRE 2002c* & SAC 2002# and EA 2003*) (cont'd).

| Latin Name | Common Name | Australian Status [♦] | Victorian Status* | FFG Act [#] | Recovery Plan [♦] | Action Statement No.* | BNA Unassessed (HNF) | BNA Unassessed (VA) | Species No. |
|--|------------------------|--------------------------------|-------------------|----------------------|----------------------------|-----------------------|----------------------|---------------------|-------------|
| <i>Eucalyptus neglecta</i> | Omeo Gum | | r | | | | Un | Un | 1301 |
| <i>Ozothamnus stirlingii</i> | Ovens Everlasting | | r | | | | Un | Un | 1629 |
| <i>Diuris punctata</i> var. <i>punctata</i> | Purple Diuris | | v | L | | | Un | Un | 1084 |
| <i>Euphrasia collina</i> ssp. <i>muelleri</i> | Purple Eyebright | End | e | L | | | | | 4468 |
| <i>Poa petrophila</i> | Rock Tussock-grass | | v | | | | Un | Un | 2603 |
| <i>Euphrasia scabra</i> | Rough Eyebright | | e | L | | 10 | | | 1343 |
| <i>Grevillea victoriae</i> ssp. <i>victoriae</i> | Royal Grevillea | | r | | | | Un | Un | 5486 |
| <i>Grevillea</i> sp. aff. <i>monslacana</i> (<i>Selma Saddle</i>) | Selma Saddle Grevillea | | v | | | | Un | Un | 5525 |
| <i>Luzula acutifolia</i> ssp. <i>acutifolia</i> | Sharp-leaf Woodrush | | r | | | | Un | Un | 2064 |
| <i>Nematolepis wilsonii</i> | Shiny Nematolepis | Vul | v | L | | 90 | Un | Un | 3922 |
| <i>Juncus falcatus</i> | Sickle-leaf Rush | | r | | | | Un | Un | 1816 |
| <i>Eucalyptus alligatrix</i> | Silver Stringybark | | r | | | | Un | Un | 1262 |
| <i>Eucalyptus alligatrix</i> ssp. <i>alligatrix</i> | Silver Stringybark | | r | | | | Un | Un | 4892 |
| <i>Petalochilus vulgaris</i> | Slender Pink-fingers | | r | | | | Un | Un | 4449 |
| <i>Aciphylla glacialis</i> | Snow Aciphyll | | v | | | | Un | Un | 113 |
| <i>Coprosma nivalis</i> | Snow Coprosma | | r | | | | Un | Un | 820 |
| <i>Oxalis magellanica</i> | Snowdrop Wood-sorrel | | r | | | | Un | Un | 2385 |
| <i>Prostanthera rhombea</i> | Sparkling Mint-bush | | v | | | | Un | Un | 2748 |
| <i>Eucalyptus perriniana</i> | Spinning Gum | | r | | | | Un | Un | 1309 |
| <i>Lycopodium scariosum</i> | Spreading Clubmoss | | r | | | | Un | Un | 2082 |
| <i>Senecio behrianus</i> | Stiff Groundsel | End | e | L | Y | 12 | Un | Un | 3101 |
| <i>Ranunculus collinus</i> | Strawberry Buttercup | | r | | | | Un | Un | 2887 |
| <i>Baeckea latifolia</i> | Subalpine Baeckea | | r | | | | Un | Un | 4267 |
| <i>Brachyscome tadgellii</i> | Tadgell's Daisy | | r | | | | Un | Un | 3656 |
| <i>Deyeuxia crassiuscula</i> | Thick Bent-grass | | r | | | | Un | Un | 1014 |
| <i>Plagiomnium novaezealandiae</i> | Thyme Moss | | r | | | | Un | Un | 6533 |
| <i>Luzula alpestris</i> | Tussock Woodrush | | r | | | | Un | Un | 2065 |
| <i>Oschatzia cuneifolia</i> | Wedge Oschatzia | | r | | | | Un | Un | 2373 |

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7.1 Jamieson Landscape Zone description (cont'd)

Table 24. List of current threatened fauna in the Jamieson Landscape Zone (EA 2003*, DSE 2003^, NRE 2002d* & SAC 2002#).

| Latin Name | Common Name | Australian Status* | Victorian Status^.* | FFG Act# | Recovery Plan* | Action Statement No.* | BNA Unassessed (HNF) | BNA Unassessed (VA) | Species No. |
|---|--------------------------------|--------------------|---------------------|----------|----------------|-----------------------|----------------------|---------------------|-------------|
| <i>Litoria verreauxii alpina</i> | Alpine Tree Frog | Vul | CR | | | | | | 3907 |
| <i>Anas rhynchotis</i> | Australasian Shoveler | | VU | | | | Un | Un | 212 |
| <i>Ninox connivens connivens</i> | Barking Owl | | EN | L | | | Un | Un | 246 |
| <i>Galaxias fuscus</i> | Barred Galaxias | End | CR | L | Y | 65 | | | 4034 |
| <i>Falco subniger</i> | Black Falcon | | VU | | | | Un | Un | 238 |
| <i>Mastacomys fuscus mordicus</i> | Broad-toothed Rat | | NT | | | | Un | | 1438 |
| <i>Phascogale tapoatafa tapoatafa</i> | Brush-tailed Phascogale | | VU | L | | 79 | | | 1017 |
| <i>Tamasia furcilla</i> | Caddisfly (5022) | | Vul | | | | Un | Un | 5022 |
| <i>Hylacola pyrrhopygia</i> | Chestnut-rumped Heathwren | | VU | | | | Un | Un | 498 |
| <i>Miniopterus schreibersii oceanensis</i> | Common Bent-wing Bat (eastern) | CD | VU | L | | | | | 1341 |
| <i>Oreoica gutturalis gutturalis</i> | Crested Bellbird | | NT | | | | Un | Un | 419 |
| <i>Stagonopleura guttata</i> | Diamond Firetail | | VU | | | | Un | Un | 652 |
| <i>Ardea alba</i> | Great Egret | | VU | L | | | Un | Un | 187 |
| <i>Litoria raniformis</i> | Growling Grass Frog | Vul | EN | | | | Un | Un | 3207 |
| <i>Aythya australis</i> | Hardhead | | VU | | | | Un | Un | 215 |
| <i>Melanodryas cucullata cucullata</i> | Hooded Robin | | NT | | | | Un | Un | 385 |
| <i>Myotis macropus</i> | Large-footed Myotis | | NT | | | | Un | Un | 1357 |
| <i>Gymnobelideus leadbeateri</i> | Leadbeater's Possum | End | EN | L | Y | 62 | | | 1141 |
| <i>Macquaria australasica</i> | Macquarie Perch | End | EN | L | | | | | 4096 |
| <i>Tyto novaehollandiae novaehollandiae</i> | Masked Owl | | EN | L | | | Un | Un | 250 |
| <i>Galaxias olidus</i> | Mountain Galaxias | | DD | L | | | Un | | 4036 |
| <i>Burrhamys parvus</i> | Mountain Pygmy-possum | End | EN | L | | 2 | Un | Un | 1156 |
| <i>Euastacus armatus</i> | Murray Spiny Cray | | Ins | | | | Un | Un | 5041 |
| <i>Biziura lobata</i> | Musk Duck | | VU | | | | Un | Un | 217 |
| <i>Nycticorax caledonicus hillii</i> | Nankeen Night Heron | | NT | | | | Un | Un | 192 |
| <i>Grantiella picta</i> | Painted Honeyeater | | VU | L | | | Un | Un | 598 |
| <i>Phalacrocorax varius</i> | Pied Cormorant | | NT | | | | Un | Un | 99 |
| <i>Ninox strenua</i> | Powerful Owl | | VU | L | | 92 | | | 248 |
| <i>Xanthomyza phrygia</i> | Regent Honeyeater | End | CR | L | Y | 41 | Un | Un | 603 |
| <i>Gadopsis marmoratus</i> | River Blackfish | | CR | | | | | | 4127 |
| <i>Platalea regia</i> | Royal Spoonbill | | VU | | | | Un | Un | 181 |
| <i>Pseudomys fumeus</i> | Smoky Mouse | End | EN | | | | Un | | 1458 |
| <i>Tyto tenebricosa tenebricosa</i> | Sooty Owl | | VU | L | | | Un | | 253 |
| <i>Chthonicola sagittata</i> | Speckled Warbler | | VU | | | | Un | Un | 504 |
| <i>Litoria spenceri</i> | Spotted Tree Frog | End | CR | L | Y | 112 | | | 3195 |
| <i>Thaumatoperla flaveola</i> | Stonefly (5001) | | Vul | L | | | Un | Un | 5001 |
| <i>Riekoperla isosceles</i> | Stonefly (5020) | | Vul | L | | | Un | Un | 5020 |
| <i>Haliaeetus leucogaster</i> | White-bellied Sea-Eagle | | VU | L | | 60 | Un | Un | 226 |

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7.2 Jamieson Landscape Zone priorities

7.2.1 Summary of priority biodiversity actions for Jamieson Landscape Zone:

- Restrict additional development of ski runs at Mount Buller and Mount Stirling Alpine Resorts that involve clearance or fragmentation of Sub-alpine Woodland and disturbance to Sub-alpine Mosaic EVCs (relevant fauna species includes Mountain Pygmy Possum).
- Continue to monitor and protect Spotted Tree Frog habitat on the Howqua River and within the Taponga River catchment, upstream of Big River. Coordinate with survey efforts in the Lake Eildon Landscape Zone.
- Conduct surveys for the Purple Eyebright to determine distribution and management requirements along roadsides and other areas (e.g. Wren's Flat).
- Encourage monitoring of Leadbeater's Possum and protect habitat throughout the zone, particularly in State Forest blocks.
- Manage weeds throughout Alpine Resorts.
- Continue to implement the Mount Buller Environmental Management Plan (Mount Buller Alpine Resort Management Board 2002).
- Improve community understanding of management of native biodiversity on private land.

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7.3 Private Land

Land Tenure Details:

This tenure type includes all private land in the zone, with associated creek lines. Out of all the zones in the South East Goulburn Broken CMA, this zone contains the least private land. Private land is consolidated in the north around Merrijig, Howqua and Jamieson Townships.

Land Manager:

Private landholders.

Stakeholders:

Key Lc, Benalla Rural City and Mansfield Shire, DSE, DPI, PV, GBCMA.

Other TFN, LFW, BG, GAV, CVA, GNP, FNC, VAA, VFF.

Threatened Biodiversity Assets (in brackets: Cons status Vic - lower case, Aust - upper case; followed by BNA priority / risk rankings for threatened taxa = 1A, 2B, etc., or un - unassessed):

EVCs: Valley Grassy Forest (e-HNF), Shrubby Dry Forest (lc-HNF), Grassy Dry Forest (lc-HNF), Herb-rich Foothill Forest (lc-HNF), Grassy Woodland (d-HNF), Damp Forest (lc-HNF), Heathy Dry Forest (lc-HNF), Riparian Forest (lc-HNF).

Threatened flora: Austral Toad-flax (eIV, 4A-HNF), Golden Pomaderris (r, unr-HNF).



Pomaderris aurea (Photo: Viridans Biological Databases)

Threatened fauna: Barking Owl (eI, unr-HNF), Powerful Owl (eI, 4A-HNF), Regent Honeyeater (ceIE, unr-HNF), Speckled Warbler (v, unr-HNF), Macquarie Perch (eIE, unr-HNF).



Speckled Warbler (Photo: DSE/Corrick)

Recommended actions:

Protection of existing remnants:

- Support the development of Local Area Plans and Whole Farm Plans.
- Continue to support and provide expertise to networks such as Landcare, Trust for Nature and Land For Wildlife ensuring extension officers can liaise effectively with landholders for the best conservation outcomes.
- Assess all freehold remnants greater than about 2 ha in the zone, and use voluntary programs, incentives or planning controls, as appropriate, to protect biodiversity values.

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7.3 Private Land (cont'd)

- Encourage landholders to control introduced plant and animal species according to CaLP Act 1994 obligations through use and expansion of Weed Action Groups and Rabbit Action Groups, particularly throughout freehold adjacent to State Forest, A5 and H2.
- Urge Benalla Rural City and Mansfield Shire to develop or upgrade local conservation strategies.
- Ensure landholders and Shire staff have access to Goulburn Broken CMA Draft Native Vegetation Plan, Volume 1 and 2 (Goulburn Broken CMA 2000) and the Shire planning staff understand Net Gain concepts and Native Vegetation Retention Controls, as well as being aware of locations of freehold remnants having threatened biodiversity values.
- Adhere strictly to Native Vegetation Retention Controls.

Management to enhance remnants for threatened taxa (BNA response level in brackets: 4 = full commitment, 3 = substantive participation, 2 = opportunistic action, 1 = watching brief):

- Powerful Owl (2-HNF) no actions listed.
- Retain live mature and senescing trees as well as dead trees and stags for Powerful Owl and Barking Owl habitat (NRE 2001b).
- Change stocking levels, exclude grazing, control weeds and employ ecological burns to benefit the Austral Toad-flax (2-HNF).



Barking Owl (Photo: Virridans Biological Databases)

Restoration of strategic vegetation blocks or linkages:

- Encourage and assist landholders to conserve strategic freehold remnants, and maintain and enhance connectivity between public land blocks.
- Encourage and assist landholders with significant freehold remnants to restore and expand existing habitats, and improve connectivity to any nearby remnants on freehold, road reserves or other tenure.
- Urge and assist Landcare groups, Land For Wildlife extension officers and Trust for Nature officers to inform landholders of their potential role in conserving biodiversity, and to coordinate their involvement for the best possible outcome. Also stress the importance of retaining scattered paddock trees, dead trees and stags.
- Protect and enhance status of unreserved stream frontages which connect or extend existing Public Land Water Frontage reserves on the Jamieson, Howqua and Delatite Rivers.

EXISTING POLICIES, PLANS OR PROGRAMS supporting one or more of the recommended actions:

- FFG Action Statement – Austral Toad-flax (56).



Thesium australe
(Photo: John Eichler)

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7.3 Private Land (cont'd)

- FFG Action Statement – Powerful Owl (92).
- FFG Action Statement – Predation by Cat (80).
- FFG Action Statement – Predation by Red Fox (44).
- FFG Action Statement – Regent Honeyeater (41).
- Recovery Plan – Regent Honeyeater (Menkhorst *et al.* 1999).
- The Action Plan for Australian Birds 2000 (Garnett and Crowley 2000).
- The Action Plan for Australian Freshwater Fishes (Wager and Jackson 1993).
- Goulburn Broken CMA Native Vegetation Plan Vol 1 and 2 (Goulburn Broken CMA 2000).
- Goulburn Broken Regional Catchment Strategy Draft (Goulburn Broken CMA 2002).
- Delatite River: Assessment of Environmental Flows. (Goulburn-Murray Water and Water Ecoscience 2002).
- Local Government and Landcare Action Plan for Nature Conservation in the Goulburn-Broken Catchment (Raven 1997).
- Victoria's Native Vegetation Management. A framework for Action (NRE 2002a).

7. Jamieson Landscape Zone

7.4 Public Land Water Frontage

Land Tenure Details:

Several segments of Public Land Water Frontage occur in the zone. These include two sections of the Delatite River, a section of the Howqua River east of Howqua, and the Jamieson River through the Jamieson township. Another small area in the very south of the zone near Alhambra is designated Public Land Water Frontage.

Land Manager:

Land Victoria.

Stakeholders:

Key GBCMA, DSE, DPI, Private.

Other VNPA, Benalla Rural City and Mansfield Shire, Lc, Weed Action Groups, Rabbit Action Groups, LFW, GAV, CVA, GNP, VFF, VAA.

Threatened Biodiversity Assets (in brackets: Cons status Vic - lower case, Aust - upper case; followed by BNA priority / risk rankings for threatened taxa = 1A, 2B, etc., or un - unassessed):

EVCs: Montane Damp Forest (lc-VA), Montane Wet Forest (lc-VA).

Threatened flora: None recorded.

Threatened fauna: Nankeen Night Heron (v, unr-HNF), Royal Spoonbill (v, unr-HNF), Mountain Galaxias north eastern Victoria (ddl, 1B-HNF).



Nankeen Night Heron
(Photo: Virdans Biological Databases)

Recommended actions:

Protection of existing remnants:

- Protect and enhance status of Public Land Water Frontage in the zone, giving priority to the Delatite, Howqua and Jamieson Rivers.
- Exclude or phase down, as appropriate, licensed grazing from water frontage, in order to permit natural regeneration of remnants.
- Enhance awareness of landholders and key stakeholders of the potential biodiversity linkage value of these frontages once restored.
- Retain dead and hollow-bearing trees and stags along riparian zones.
- Encourage and support voluntary groups in revegetation and weed management efforts.

7. Jamieson Landscape Zone

7.4 Public Land Water Frontage (cont'd)

Management to enhance remnants for threatened taxa (BNA response level in brackets: 4 = full commitment, 3 = substantive participation, 2 = opportunistic action, 1 = watching brief):

- Intended change to stocking levels to benefit the Mountain Galaxias (3-HNF), i.e. continue policy of no trout stocking to streams running into Lake Eildon. Retain and supplement riparian vegetation to decrease sedimentation to enhance habitat for Mountain Galaxias (NRE 2001b).



Mountain Galaxias
(Photo: DSE)

Restoration of strategic vegetation blocks or linkages:

- Initiate weed control and revegetation of degraded creek line frontages, giving priority to sections where increased connectivity will be most strategic and potentially effective, particularly on the Howqua River at the interface of the Howqua Heritage River Reserve and the Delatite River in the vicinity of State Forest blocks.
- Identify adjoining or strategic landholders having potential connectivity value, and encourage complementary revegetation using incentives and voluntary programs.

EXISTING POLICIES, PLANS OR PROGRAMS supporting one or more of the recommended actions:

- FFG Action Statement – Predation by Cat (80).
- FFG Action Statement – Predation by Red Fox (44).
- Goulburn Broken CMA Native Vegetation Plan Vol 1 and 2 (Goulburn Broken CMA 2000).
- Goulburn Broken Regional Catchment Strategy Draft (Goulburn Broken CMA 2002).
- Revegetation Guide for the Goulburn Broken Catchment (Earl *et al.* 2001).
- Victorian Recreational Fishing Guide 2002-2003 (NRE 2002e).
- Delatite River: Assessment of Environmental Flows. (Goulburn-Murray Water and Water Ecoscience 2002).
- Local Government and Landcare Action Plan for Nature Conservation in the Goulburn-Broken Catchment (Raven 1997).
- Victoria's Native Vegetation Management. A framework for Action (NRE 2002a).

7. Jamieson Landscape Zone

7.5 Water Production

Land Tenure Details:

The tenure is represented in this zone by only two small arms of Lake Eildon, north and north west of Jamieson. As with the main Lake Eildon, a buffer zone of 200 m surrounds the water line.

Land Manager:

Goulburn-Murray Water.

Stakeholders:

Key DSE, DPI, GBCMA.

Other VEAC, Benalla Rural City and Mansfield Shire, FNC, BG, TSN, PV, VAA, BEAM, CVA.

Threatened Biodiversity Assets (in brackets: Cons status Vic - lower case, Aust - upper case; followed by BNA priority / risk rankings for threatened taxa = 1A, 2B, etc., or un - unassessed):

EVCs: Grassy Dry Forest (lc-HNF), Herb-rich Foothill Forest (lc-HNF), Valley Grassy Forest (e-HNF).

Threatened flora: None recorded.

Threatened fauna: Australasian Shoveler (v, unr-HNF), Great Egret (el, unr-HNF), Hardhead (v, unr-HNF), Musk Duck (v, unr-HNF), Painted Honeyeater (vl, unr-HNF), Pied Cormorant (lr-nt, unr-HNF), Regent Honeyeater (ceIE, unr-HNF), Royal Spoonbill (v, unr-HNF), White-bellied Sea Eagle (el, unr-HNF), Macquarie Perch (eIE, 1A-HNF), Warty Bell Frog (vV, unr-HNF).



Hardhead (Photo: Viridans Biological Databases)

Recommended actions:

Protection of existing remnants:

- Maintain the status of Lake Eildon, to conserve and enhance wetland habitat values for flora, fish and water birds whilst providing for recreation and water supply purposes.
- Ascertain the biodiversity value or potential of buffer vegetation in the arm of the lake leading to Jamieson, and adjoining private land, that any such values are protected appropriately.
- Maintain monitoring of tourist and visitor access to the lake and buffer zones so that conservation of biodiversity values are not compromised. Restrict access to known breeding sites of water birds.

7. Jamieson Landscape Zone

7.5 Water Production (cont'd)

Management to enhance remnants for threatened taxa (BNA response level in brackets: 4 = full commitment, 3 = substantive participation, 2 = opportunistic action, 1 = watching brief):

- Remove water contaminants, perform reintroductions and relocations and enforce legislation to benefit the Macquarie Perch (4-HNF).
- Also refer to “Other Policies”, below.

Restoration of strategic vegetation blocks or linkages:

- Encourage collaboration with adjoining landholders in the Jamieson area to restore connectivity via creek line and other remnants.

EXISTING POLICIES, PLANS OR PROGRAMS supporting one or more of the recommended actions:

- FFG Action Statement – Predation by Cat (80).
- FFG Action Statement – Predation by Red Fox (44).
- FFG Action Statement – Regent Honeyeater (41).
- FFG Action Statement – White-bellied Sea-eagle (60).
- Recovery Plan – Regent Honeyeater (Menkhorst *et al.* 1999).
- JAMBA – Great Egret.
- CAMBA – Great Egret, White-bellied Sea Eagle.
- The Action Plan for Australian Birds 2000 (Garnett and Crowley 2000).
- The Action Plan for Australian Freshwater Fishes (Wager and Jackson 1993).
- The Action Plan for Australian Frogs (Tyler 1997).
- Revegetation Guide for the Goulburn Broken Catchment (Earl *et al.* 2001).



Regent Honeyeater
(Photo: DSE/Handy)

7. Jamieson Landscape Zone

7.6 State Forest

Land Tenure Details:

This tenure occupies the majority of the zone and consists of the State Forest blocks (including Eildon/Big River Forest) adjoining the Alpine National Park and the Mount Buller and Mount Stirling Alpine Resorts in the north of the zone, extending south to Matlock.

Land Manager:

DSE Forests.

Stakeholders:

Key GBCMA, PV.

Other VEAC, VNPA, VAA, BG, TSN, GNP, FNC, Benalla Rural City and Mansfield Shire, Private.

Threatened Biodiversity Assets (in brackets: Cons status Vic - lower case, Aust - upper case; followed by BNA priority / risk rankings for threatened taxa = 1A, 2B, etc., or un - unassessed):

EVCs: Damp Forest (lc-HNF, lc-VA), Grassy Dry Forest (lc-HNF), Grassy Woodland (d-HNF), Heathy Dry Forest (lc-HNF), Herb-rich Foothill Forest (lc-HNF, lc-VA), Montane Damp Forest (lc-HNF, lc-VA), Montane Dry Woodland (lc-HNF, lc-VA), Montane Wet Forest (lc-VA), Riparian Forest (lc-HNF), Shrubby Dry Forest (lc-HNF), Sub-alpine Woodland (lc-VA), Wet Forest (lc-HNF, lc-VA).

Threatened flora: Alpine Blown-grass (rR, unr-HNF), Cobra Greenhood (r, unr-VA), Cliff Cudweed (r, unr-HNF), Cobra Greenhood (r, unr-HNF), Common Spleenwort (r, unr-HNF), Common Starwort (consn. status¹, unr-HNF), Dense Mint-bush (r, unr-HNF), Dwarf Silver Wattle (r, unr-HNF), Golden Pomaderris (r, unr-HNF), Lanky Buttons (e, unr-HNF), Leafy Greenhood (vIV, 3B-HNF), Lilac Berry (r, unr-VA), Omeo Gum (rR, unr-HNF, unr-VA), Purple Eyebright (eE, 1A-HNF), Shiny Nematolepis (vIV, unr-HNF), Silver Stringybark (rR, unr-HNF), Stiff Groundsel (eIE, unr-HNF), Strawberry Buttercup (r, unr-HNF), Thick Bent-grass (r, unr-VA), Wedge Oschatzia (rR, unr-VA).



Nematolepis wilsonii (Photo: John Eichler)

¹ The oversight of this species appearing on the database as a threatened taxon is being addressed by staff at DSE.

7. Jamieson Landscape Zone

7.6 State Forest (cont'd)

Threatened fauna: Broad-toothed Rat (lr-nt, 2C-VA), Brush-tailed Phascogale (vl, 4B-HNF), Common Bent-wing Bat (vl, 3B-HNF), Leadbeater's Possum (eIE, 4A-HNF, 3A-VA), Smoky Mouse (enE, 2A-HNF, unr-VA), Southern Myotis (lr-nt, 3C-HNF), Barking Owl (el, unr-HNF), Chestnut-rumped Heathwren (dd, unr-HNF), Masked Owl (el, unr-VA), Nankeen Night Heron (v, unr-HNF), Painted Honeyeater (vl, unr-HNF), Powerful Owl (el, 2B-HNF), Regent Honeyeater (ceIE, unr-HNF), Sooty Owl (vl, 2B-HNF, unr-VA), White-bellied Sea Eagle (el, unr-HNF), Alpine Bog Skink (vl, unr-VA), Spotted Tree Frog (ceIE, 1A-HNF), Barred Galaxias (ceIE, 1A-HNF, unr-VA), Macquarie Perch (eIE, unr-HNF), Mountain Galaxias north eastern Victoria (ddl, 1B-HNF, unr-VA), River Blackfish (dd, 1B-HNF), Hemiphysalis Damsel (vl, unr-VA), Harpacticoid Copepod *Canthocamptus mammillifurca* (dd, unr-HNF), Harpacticoid Copepod *Canthocamptus dedeckerii* (dd, unr-HNF), Murray Spiny Cray (dd, unr-HNF), Planarian *Spathula tryssa* (consn. status², unr-VA), Stonefly *Thaumatoperla flaveola* (v, unr-HNF, unr-VA).



Smoky Mouse (Photo: DSE/McCann)

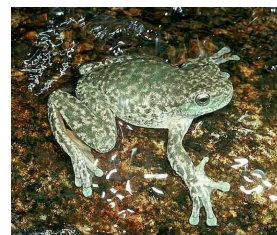
Recommended actions:

Protection of existing remnants:

- Encourage adjacent landholders in the Merrijig area to the north of the zone to participate in Weed Action Groups and Rabbit Action Groups.
- Continual active management of weeds throughout forest remnants, particularly around the perimeter to control encroachment from private land.
- Maintain firebreaks and ensure burning regimes consider requirements for threatened flora.
- Retain hollow-bearing trees and stags whenever possible.
- Assess impacts of bees on high value assets where these are likely to be significant and control feral bee infestations where necessary.
- Implement the conservation guidelines from the Central Highlands Forest Management Plan (NRE 1998) and North East Forest Management Plan (NRE 2001b).
- Application of Code of Forestry Practices (Government of Victoria 1996).

Management to enhance remnants for threatened taxa (BNA response level in brackets: 4 = full commitment, 3 = substantive participation, 2 = opportunistic action, 1 = watching brief):

- Predator control has been recommended for the Brush-tailed Phascogale (1-HNF) and Spotted Tree Frog (4-HNF).



Spotted Tree Frog (Photo: DSE/Gillespie)

² This species has been now been delisted.

7. Jamieson Landscape Zone

7.6 State Forest (cont'd)

- Grazing exclusion and changing stocking levels have been recommended for the Brush-tailed Phascogale (1-HNF).
- Fire control/exclusion has been recommended for the Smoky Mouse (3-HNF) and Spotted Tree Frog (4-HNF).
- Removal of water contaminants has been recommended for River Blackfish (3-HNF) and the Spotted Tree Frog (4-HNF).
- Weed control has been recommended for the Spotted Tree Frog (4-HNF).
- No actions listed for the following species see 'Other Policies' below: Broad-toothed Rat (1-VA), Common Bent-wing Bat (1-HNF), Leadbeater's Possum (3-HNF, 3-VA), Southern Myotis (1-HNF), Powerful Owl (4-HNF), Sooty Owl (2-HNF), Barred Galaxias (4-HNF), and Mountain Galaxias north eastern Victoria (3-HNF).
- Include Leadbeater's Possum Zone 1A habitat, including living mature and senescing trees, in the Special Protection Zone, as specified by the Central Highlands Forest Management Plan (NRE 1998).
- Retain hollow-bearing trees and establish buffers of Special Protection Zone around confirmed breeding and roost sites of the Southern Myotis and Common Bent-wing Bat (NRE 2001b).
- Retain hollow-bearing and senescing trees to benefit Powerful and Sooty Owls (NRE 2001b).
- Change stocking levels, prescribe ecological burning and exclude human disturbance to benefit the Purple Eyebright (4-HNF).
- Control weeds and human disturbance to benefit Leafy Greenhood (1-HNF).



Southern Myotis (Photo: DSE/Lumsden)



Euphrasia collina ssp. *muelleri*
(Photo: John Eichler)

Restoration of strategic vegetation blocks or linkages:

- Most of the State Forest in this zone is continuous. Encourage adjacent landholders in the Merrijig area to the north of the zone to maintain and enhance remnant links to State Forest blocks, especially along drainage and creek lines.

EXISTING POLICIES, PLANS OR PROGRAMS supporting one or more of the recommended actions:

- FFG Action Statement – Barred Galaxias (65).
- FFG Action Statement – Brush-tailed Phascogale (79).
- FFG Action Statement – Hemiphysalia Damselfly (46).
- FFG Action Statement – Leadbeater's Possum (62).
- FFG Action Statement – Leafy Greenhood (54).
- FFG Action Statement – Powerful Owl (92).



Pterostylis cucullata (Photo: John Eichler)

7. Jamieson Landscape Zone

7.6 State Forest (cont'd)

- FFG Action Statement – Predation by Red Fox (44).
- FFG Action Statement – Predation by Cat (80).
- FFG Action Statement – Regent Honeyeater (41).
- FFG Action Statement – Shiny Nematolepis (90).
- FFG Action Statement – Spotted Tree Frog (112).
- FFG Action Statement – Stiff Groundsel (12).
- FFG Action Statement – White-bellied Sea Eagle (60).
- Recovery Plan – Barred Galaxias (Raadik 1995).
- Recovery Plan – Leadbeater's Possum (Macfarlane *et al.* 1997).
- Recovery Plan – Regent Honeyeater (Menkhorst *et al.* 1999).
- Recovery Plan – Spotted Tree Frog 1998-2002 (Gillespie and Robertson 1998).
- Recovery Plan – Stiff Groundsel (Alexander 1999).
- The Action Plan for Australian Bats (Duncan *et al.* 1999).
- The Action Plan for Australian Birds 2000 (Garnett and Crowley 2000).
- The Action Plan for Australian Freshwater Fishes (Wager and Jackson 1993).
- The Action Plan for Australian Frogs (Tyler 1997).
- The Action Plan for Australian Marsupials and Monotremes (Maxwell *et al.* 1996).
- The Action Plan for Australian Rodents (Lee 1995).
- CAMBA – White-bellied Sea-eagle.
- Goulburn Broken Regional Catchment Strategy Draft (Goulburn Broken CMA 2002).
- Goulburn Broken CMA Draft Native Vegetation Plan, Volume 1 and 2 (Goulburn Broken CMA 2000).
- Victoria's Native Vegetation Management. A framework for Action (NRE 2002a).
- Revegetation Guide for the Goulburn Broken Catchment (Earl *et al.* 2001).
- Central Highlands Forest Management Plan (NRE 1998).

7. Jamieson Landscape Zone

7.7 Other Public Land

Land Tenure Details:

This tenure is represented by the Howqua Hills Historic Area (G1, 1,300 ha adjacent to the Alpine National Park) and Mt Russell Education Area (H2) adjacent to the Alpine Resort of Mount Buller. Two other historic areas occur in the south of the zone east of Matlock: Woods Point Goldmines Historic Area (F11, 450 ha) and Matlock Hill Historic Area (F10, 50 ha). F11 contains two parts and includes mines, workings and settlements associated with the early Victorian Goldmining History (LCC 1994) while F10 consists of the historic township area of the Matlock gold-mining township. A large Other Public Land block occurs east of Merrijig and in the south, a service and utilities area occurs to the north of Fiddlers Green and a community use area is located at Woods Point.

Land Manager:

DSE Forests.

Stakeholders:

Key GBCMA, Benalla Rural City and Mansfield Shire.

Other VEAC, VNPA, VAA, TSN, BG, GNP, FNC, Private, CVA.

Threatened Biodiversity Assets (in brackets: Cons status Vic - lower case, Aust - upper case; followed by BNA priority / risk rankings for threatened taxa = 1A, 2B, etc., or un - unassessed):

EVCs: Damp Forest (lc-HNF), Grassy Dry Forest (lc-HNF), Heathy Dry Forest (lc-HNF), Herb-rich Foothill Forest (lc-HNF, lc-VA), Montane Damp Forest (lc-HNF, lc-VA), Montane Dry Woodland (lc-HNF), Montane Wet Forest (lc-VA), Riparian Forest (lc-VA), Shrubby Dry Forest (lc-HNF), Sub-alpine Woodland (lc-VA).

Threatened flora: Alpine Finger Fern (r, unr-VA), Cliff Cudweed (r, unr-VA), Eichler's Buttercup (rR, unr-VA), Fir Clubmoss (r, unr-VA), Fog Club-sedge (r, unr-VA), Golden Moths (e, unr-HNF), Gunn's Alpine Buttercup (r, unr-VA), Hairy Eyebright (r, unr-VA), Mossy Knawel (r, unr-VA), Mountain Bird-orchid (r, unr-HNF), Mueller's Bent (r, unr-VA), Purple Diuris (vl, unr-HNF), Rough Eyebright (eIK, unr-HNF), Slender Caladenia (k, unr-HNF), Snow Aciphyll (v, unr-VA), Spinning Gum (r, unr-VA), Spreading Clubmoss (r, unr-VA), Thick Bent-grass (r, unr-VA).



Euphrasia lasianthera
(Photo: John Eichler)

Threatened fauna: Australasian Shoveler (v, unr-HNF), Great Egret (el, unr-HNF), Hardhead (v, unr-HNF), Musk Duck (v, unr-HNF), Nankeen Night Heron (v, unr-HNF), Painted Honeyeater (vl, unr-HNF), Pied Cormorant (lr-nt, unr-HNF), Regent Honeyeater (ceIE, unr-HNF), Royal Spoonbill (v, unr-HNF), White-bellied



Warty Bell Frog (Photo: Peter Robertson)

Sea Eagle (el, unr-HNF), Spotted Tree Frog (ceIE, unr-HNF), Warty Bell Frog (vV, unr-HNF), Barred Galaxias (ceIE, unr-HNF), Macquarie Perch (eIE, 1A-HNF).

7. Jamieson Landscape Zone

7.7 Other Public Land (cont'd)

Recommended actions:

Protection of existing remnants:

- Update or produce management plans for G1 and G2 so that biodiversity values are identified and conserved.
- Maintain entrances to old mines for bat roosting habitat.

Management to enhance remnants for threatened taxa (BNA response level in brackets: 4 = full commitment, 3 = substantive participation, 2 = opportunistic action, 1 = watching brief):

- Remove water contaminants, perform reintroductions and relocations and enforce legislation to benefit the Macquarie Perch (4-HNF).
- Retain woody, in-stream debris and minimise stream crossings to benefit the Barred Galaxias (NRE 2001b).
- Minimise stream crossings and control introduced predators (e.g. Trout) to benefit the Spotted Tree Frog (NRE 2001b).



Restoration of strategic vegetation blocks or linkages:

- Investigate with adjoining landholders at Howqua Hills Historic Area any options to bolster connectivity adjacent to existing remnants, especially along drainage lines.
- Maintain liaison with adjacent Alpine Resorts and Parks Victoria managers to coordinate revegetation and weed management at G1 and G2.

EXISTING POLICIES, PLANS OR PROGRAMS supporting one or more of the recommended actions:

- FFG Action Statement – Barred Galaxias (65).
- FFG Action Statement – Predation by Cat (80).
- FFG Action Statement – Predation by Red Fox (44).
- FFG Action Statement – Regent Honeyeater (41).
- FFG Action Statement – Rough Eyebright (10).
- FFG Action Statement – Spotted Tree Frog (112).
- FFG Action Statement – White-bellied Sea-eagle (60).
- Recovery Plan – Barred Galaxias (Raadik 1995).
- Recovery Plan – Regent Honeyeater (Menkhorst *et al.* 1999).
- Recovery Plan – Spotted Tree Frog 1998-2002 (Gillespie and Robertson 1998).

7. Jamieson Landscape Zone

7.7 Other Public Land (cont'd)

- The Action Plan for Australian Birds 2000 (Garnett and Crowley 2000).
- The Action Plan for Australian Freshwater Fishes (Wager and Jackson 1993).
- The Action Plan for Australian Frogs (Tyler 1997).
- JAMBA – Great Egret.
- CAMBA – Great Egret, White-bellied Sea Eagle.
- Goulburn Broken CMA Native Vegetation Plan Vol 1 and 2 (Goulburn Broken CMA 2000).
- Goulburn Broken Regional Catchment Strategy Draft (Goulburn Broken CMA 2002).
- Revegetation Guide for the Goulburn Broken Catchment (Earl *et al.* 2001).
- Local Government and Landcare Action Plan for Nature Conservation in the Goulburn-Broken Catchment (Raven 1997).
- Victoria's Native Vegetation Management. A framework for Action (NRE 2002a).

7. Jamieson Landscape Zone

7.8 Local Government

Land Tenure Details:

The tenure includes municipal roadsides and township land of the Benalla Rural City and Mansfield Shire throughout the zone. The representation by this tenure is very small and occurs mainly in the extreme north of the zone around Merrijig in the Benalla Rural City and Mansfield Shire.

Land Manager:

Benalla Rural City and Mansfield Shire.

Stakeholders:

Key DSE, DPI, GBCMA, PV.

Other Private, CFA, BG, LFW, FNC, CVA, GAV, TFN.

Threatened Biodiversity Assets (in brackets: Cons status Vic - lower case, Aust - upper case; followed by BNA priority / risk rankings for threatened taxa = 1A, 2B, etc., or un - unassessed):

EVCs: Valley Grassy Forest (e-HNF), Shrubby Dry Forest (lc-HNF), Grassy Dry Forest (lc-HNF), Herb-rich Foothill Forest (lc-HNF), Grassy Woodland (d-HNF).

Threatened flora: None recorded.

Threatened fauna: None recorded.

Recommended actions:

Protection of existing remnants:

- Assist Shires to develop, or update existing, roadside conservation plans and encourage integration with voluntary efforts on adjacent freehold.
- Promote voluntary programs (e.g. Land For Wildlife) and planning overlays, as tools to assist Shires in protecting and managing roadsides.
- Identify in Shire roadside conservation plans roads of high conservation significance.
- Ensure the Country Fire Authority are aware of significant roadside areas and employ control burning on these sites that is sympathetic to the conservation of threatened flora and fauna.
- Ensure that Shire staff (especially road crews as well as construction and other contractors) are aware of significant habitat and taxa on roadsides during fire protection works, utility works or road maintenance.

7. Jamieson Landscape Zone

7.8 Local Government (cont'd)

- Erect signage to identify significant roadside areas.
- Generally exclude grazing on or near roadsides having native vegetation elements of conservation significance, even if the community is fragmented and degraded.
- Protect existing roadside remnants, giving priority to those having mature and hollow-bearing trees, and tall shrubby understorey with sparse grassy ground layer. Prevent removal from roadside habitats of fallen timber, logs or dead-standing trees which provide wildlife habitat.
- Encourage establishment between Benalla Rural City, Mansfield Shire and the Department of Sustainability and Environment of a Public Authority Management Agreement to protect and maintain roadsides having significant conservation values (Davidson 1996) in the Benalla Rural City and Mansfield Shire.

Management to enhance remnants for threatened taxa (BNA response level in brackets: 4 = full commitment, 3 = substantive participation, 2 = opportunistic action, 1 = watching brief):

- No specific BNA management actions listed. See 'Other Policies', below.

Restoration of strategic vegetation blocks or linkages:

- In determining priorities for roadside habitat restoration in the zone, give special consideration to those areas where roadside biodiversity values have the greatest potential to complement existing remnants on adjacent State Forest tenures.
- Encourage collaboration between Shires and adjoining landholders (particularly where Land for Wildlife properties are established) to develop and continue implementing local revegetation strategies targeting key roadside habitats, and extend existing roadside/creek line habitat linkages known or likely to support threatened taxa.
- Encourage Shires, in conjunction with community groups, to apply for Land For Wildlife status where suitable (e.g. cemeteries and some roadsides).
- In expanding linear habitat networks, utilize nodes on creek-crossings, intersections with other road reserves or patches on adjacent freehold.

EXISTING POLICIES, PLANS OR PROGRAMS supporting one or more of the recommended actions:

- Goulburn Broken CMA Native Vegetation Plan Vol 1 and 2 (Goulburn Broken CMA 2000).
- Goulburn Broken Regional Catchment Strategy Draft (Goulburn Broken CMA 2002).

7. Jamieson Landscape Zone

7.8 Local Government (cont'd)

- Roadside Assessment Handbook (Roadsides Conservation Advisory Committee 2000a).
- Roadside marking of Special Environmental Areas (Roadsides Conservation Advisory Committee 2000b).
- Roadside Handbook (VicRoads 1992).
- Revegetation Guide for the Goulburn Broken Catchment (Earl *et al.* 2001).
- Local Government and Landcare Action Plan for Nature Conservation in the Goulburn-Broken Catchment (Raven 1997).
- Victoria's Native Vegetation Management. A framework for Action (NRE 2002a).

7. Jamieson Landscape Zone

7.9 Alpine Resorts

Land Tenure Details:

Mount Buller (O6) and Mount Stirling (O7) Alpine Resorts occur in this zone. They both cater to the skiing tourism industry and provide accommodation and skiing facilities including various downhill and cross country ski runs and ski lifts. These Alpine Resorts, like the Alpine National Park contain unique Alpine flora and fauna indigenous to the alpine environment.

Land Manager:

Private landholders, Mt. Buller and Mt. Stirling Board of Management.

Stakeholders:

Key DSE, DPI, PV, GBCMA.

Other Benalla Rural City and Mansfield Shire, VEAC, TFN, LFW, BG, GAV, CVA, GNP, FNC, VAA, VFF, CFA.

Threatened Biodiversity Assets (in brackets: Cons status Vic - lower case, Aust - upper case; followed by BNA priority / risk rankings for threatened taxa = 1A, 2B, etc., or un - unassessed):

EVCs: Damp Forest (lc-HNF, lc-VA), Herb-rich Foothill Forest (lc-HNF, lc-VA), Montane Damp Forest (lc-VA), Montane Dry Woodland (lc-VA), Montane Riparian Thicket (lc-VA), Riparian Forest (lc-HNF, lc-VA), Shrubby Dry Forest (lc-HNF), Treeless Sub-alpine Mosaic (v-VA), Sub-alpine Woodland (lc-VA), Wet Forest (lc-HNF).

Threatened flora: None recorded.

Threatened fauna: Broad-toothed Rat (lr-nt, 4C-VA), Mountain Pygmy Possum (eIV, 1A-VA), Black Falcon (e, unr-VA), Alpine Bog Skink (vl, unr-VA), Alpine Tree Frog (ceV, 1A-VA), Spotted Tree Frog (ceI, unr-VA), Caddisfly *Tamasia furcilla* (v, unr-VA), Planaria *Spathula tryssa* (cons. status³, unr-VA), Stonefly *Riekoperla isosceles* (v, unr-VA), Stonefly *Thaumatoperla flaveola* (v, unr-VA).

³ This species has been now been delisted.

7. Jamieson Landscape Zone

7.9 Alpine Resorts (cont'd)

Recommended actions:

Protection of existing remnants:

- Ensure Alpine Resort managers adhere to Vegetation Framework when considering future developments.
- Phase out or exclude grazing from Alpine remnants, particularly in Alpine Bogs to protect the Alpine Bog Skink and Broad-toothed Rat.
- Phase out the planting of exotic species in ski villages and use of introduced grasses for slope grooming purposes.
- Update Mount Buller's Environment Management Plan and encourage the production of an Environment Management Plan for Mount Stirling, incorporating weed management.
- Limit the removal or disturbance of basalt and/or granite blockstream habitat.
- Identify and manage tourism impacts, particularly with regards to 4WD activity above the tree line at Mount Stirling.
- Through liaison with relevant stakeholders and land managers, investigate the exclusion or restriction of domestic Dogs and Cats.
- Work with the Department of Sustainability and Environment to complete FFG Action Statement for Alpine Stoneflies, emphasising the need to protect streams to their source near the Mount Buller summit.

Management to enhance remnants for threatened taxa (BNA response level in brackets: 4 = full commitment, 3 = substantive participation, 2 = opportunistic action, 1 = watching brief):

- Control introduced predators (e.g. Foxes) as well as domestic Dogs and Cats, particularly around resort grounds, to benefit the Broad-toothed Rat (1-VA) and Mountain Pygmy Possum (4-VA). Fully adopt reviewed management strategy and zoning to protect the Mountain Pygmy Possum and its habitat.
- Alpine Tree Frog (4-VA) no actions listed.
- Minimise stream crossings to benefit the Spotted Tree Frog (NRE 2001b).



Mountain Pygmy Possum
(Photo: Fredy Mercay)

Restoration of strategic vegetation blocks or linkages:

- Revegetate ski slopes in danger of, or having signs of erosion.
- Maintain Sub-alpine Woodland linkages between high-use resort areas and ski-runs.

7. Jamieson Landscape Zone

7.9 Alpine Resorts (cont'd)

EXISTING POLICIES, PLANS OR PROGRAMS supporting one or more of the recommended actions:

- FFG Action Statement – Mountain Pygmy Possum (2).
- FFG Action Statement – Predation by Cat (80).
- FFG Action Statement – Predation by Red Fox (44).
- FFG Action Statement – Spotted Tree Frog (112).
- Recovery Plan – Spotted Tree Frog 1998-2002 (Gillespie and Robertson 1998).
- The Action Plan for Australian Frogs (Tyler 1997).
- The Action Plan for Australian Marsupials and Monotremes (Maxwell *et al* 1996).
- The Action Plan for Australian Rodents (Lee 1995).
- Goulburn Broken CMA Native Vegetation Plan Vol 1 and 2 (Goulburn Broken CMA 2000).
- Goulburn Broken Regional Catchment Strategy Draft (Goulburn Broken CMA 2002).
- Recommendations for the Mountain Pygmy Possum in Mansergh and Broome (1994).
- Revegetation Guide for the Goulburn Broken Catchment (Earl *et al.* 2001).
- Mount Buller Environmental Management Plan, Mount Buller Alpine Resort Management Board (2002).
- Victoria's Native Vegetation Management. A framework for Action (NRE 2002a).

7. Jamieson Landscape Zone

7.10 Parks and Reserves

Land Tenure Details:

This zone contains a number of conservation reserves including two blocks of Lake Eildon National Park (A15) west of Jamieson, the Alpine National Park (A1, in part of 646,000 ha), as well as The Governor Remote Wilderness Area of the Alpine National Park. The zone also contains three Natural Features and Scenic Reserves: Mount Terrible (G39, 100 ha), Mount Skene (D2) and the Goulburn River south of Jamieson. A section of the Howqua River east of Lake Eildon is designated as a Heritage River Reserve (G38). An un-named Bushland Reserve occurs north of Woods Point and another between Matlock and Roberts in the south of the zone and an un-named Nature Conservation Reserve (C53) / Natural Catchment Area occurs in the Williams Creek Catchment in State Forest south of Jamieson. Spot-tailed Quoll records have recently been collected from Eagles Peak (S. Smith pers. comm.).

Land Manager:

PV.

Stakeholders:

Key GBCMA, DSE.

Other VEAC, VNPA, TSN, BG, GNP, FNC, Private, Benalla Rural City and Mansfield Shire.

Threatened Biodiversity Assets (in brackets: Cons status Vic - lower case, Aust - upper case; followed by BNA priority / risk rankings for threatened taxa = 1A, 2B, etc., or un - unassessed):

EVCs: Damp Forest (lc-HNF): A15, F11; Damp Forest (lc-HNF, lc-VA): A1, The Governor Remote Wilderness Area, unnamed Natural Catchment Area (7), Big River Natural Features and Scenic Reserve, G38; Grassy Dry Forest (lc-HNF): A15, A1, The Governor Remote Wilderness Area, unnamed Natural Catchment Area (7); Heathy Dry Forest (lc-HNF): A15, A1, F11, unnamed Natural Catchment Area (7); Herb-rich Foothill Forest (lc-HNF): A15, A1, F11, The Governor Remote Wilderness Area, unnamed Natural Catchment Area (7), Big River Natural Features and Scenic Reserve, G38, unnamed Bushland Reserve (near Woods Point); Montane Damp Forest (lc-HNF, lc-VA): F10, A1, F11, The Governor Remote Wilderness Area, Mt Skene Natural Features and Scenic Reserve; Montane Dry Woodland (lc-HNF, lc-VA): A15, G39, Mt Skene Natural Features and Scenic Reserve, A1, The Governor Remote Wilderness Area; Montane Riparian Thicket (lc-VA): A1; Montane Wet Forest (lc-VA): Mt Skene Natural Features and Scenic Reserve; Shrubby Dry Forest (lc-HNF): A1, The Governor Remote Wilderness Area, unnamed Natural Catchment Area (7), G38; Riparian Forest (lc-HNF): F11, natural catchment area (7), Big River Natural Features and Scenic Reserve, G38; Riparian Forest/Swampy Riparian Woodland/Riparian Shrubland/Riverine Escarpment Scrub/Disturbed Mosaic (d-HNF): A1; Sub-alpine Woodland (lc-VA): G39, Mt Skene Natural Features and Scenic Reserve, A1, The Governor Remote Wilderness Area; Rocky Outcrop Shrubland/Herbland Mosaic (r-VA): A1; Treeless Sub-alpine Mosaic (v-VA): Mt Skene Natural Features and Scenic Reserve, A1, The Governor Remote Wilderness Area; Wet Forest (lc-VA): F11.

7. Jamieson Landscape Zone

7.10 Parks and Reserves (cont'd)

Threatened flora: Avon Tussock-grass (r, unr-VA), Brittle Bladder-fern (rR, unr-VA), Eichler's Buttercup (rR, unr-VA), Fog Club-sedge (r, unr-VA), Gunn's Alpine Buttercup (r, unr-VA), Highland Bush-pea (rK, unr-HNF), Kybean Mallee Ash (r, unr-VA), Lilac Berry (r, unr-VA), Mountain Mitrewort (r, unr-VA), Omeo Gum (rR, unr-HNF), Rock Tussock-grass (v, unr-VA), Sharp-leaf Woodrush (r, unr-VA), Sickle-leaf Rush (r, unr-VA), Silver Stringybark (rR, unr-HNF), Snow Aciphyll (v, unr-VA), Snowdrop Wood-sorrel (r, unr-HNF), Tussock Woodrush (r, unr-VA).



Ranunculus gunnarianus
(Photo: John Eichler)

Threatened fauna: Broad-toothed Rat (1r-nt, 3C-HNF, 3C-VA), Common Bent-wing Bat (vl, 4B-HNF), Smoky Mouse (enE, 3A-HNF), Painted Honeyeater (vl, unr-HNF), Powerful Owl (el, 1A-HNF), Sooty Owl (vl, 4B-HNF), White-bellied Sea Eagle (el, unr-HNF), Alpine Bog Skink (vl, 1A-VA), Alpine Tree Frog (ceV, 1A-VA), Spotted Tree Frog (ceE, 3A-HNF), Barred Galaxias (ceE, unr-HNF), Mountain Galaxias north eastern Victoria (ddl, 2B-HNF), Murray Spiny Cray (dd, unr-HNF, unr-VA), Planarian *Spathula tryssa* (consn. status⁴, unr-HNF), Stonefly *Thaumatoperla flaveola* (v, unr-VA), Spot-tailed Quoll (elV, 4A-HNF).



Painted Honeyeater (Photo:
DSE/McCann)

Recommended actions:

Protection of existing remnants:

- As far as possible, determine measures appropriate to protect known and likely habitat of threatened flora taxa recorded from the tenure, and incorporate this information into the reserve management planning process.
- Produce or update environment management plans.
- Remove or phase out domestic grazing from all reserves in the tenure, particularly the Alpine National Park (A1).
- Maintain roads throughout parks and reserves, especially at river crossings, to reduce sediment input to rivers and streams. Consider permanent closure of tracks that cannot be maintained or where sedimentation impacts cannot be rectified.

Management to enhance remnants for threatened taxa (BNA response level in brackets: 4 = full commitment, 3 = substantive participation, 2 = opportunistic action, 1 = watching brief):

- Predator control has been recommended for the Broad-toothed Rat (1-HNF, VA), Common Bent-wing Bat (1-HNF) and Spotted Tree Frog (3-HNF).
- Fire control/exclusion has been recommended for the Smoky Mouse (3-HNF).

⁴ This species has been now been delisted.

7. Jamieson Landscape Zone

7.10 Parks and Reserves (cont'd)

- Control and/or exclude fire and human disturbance from Common Bent-wing Bat habitat, as well as manage visitor access to benefit this species (1-HNF).
- Weed control, ecological burning and enhanced flow regimes have been recommended for the Spotted Tree Frog (3-HNF).
- Grazing exclusion has been recommended for the Alpine Bog Skink (4-VA) and the Alpine Tree Frog (4-VA).
- Control predators to benefit the Spot-tailed Quoll (2-HNF).
- Weed control has been recommended for the Alpine Tree Frog (4-VA).
- Powerful Owl (4-HNF), Sooty Owl (1-HNF) and Mountain Galaxias north eastern Victoria (2-HNF): No actions listed, see 'Other Policies' below.

Restoration of strategic vegetation blocks or linkages:

- The majority of reserves in this tenure are continuous with State Forests or Alpine Resorts therefore restoration of linkages is not applicable with the exception of enhancing riparian connectivity between Howqua River Heritage Reserve and Public Land Water Frontage Reserve to the west towards Howqua.
- Continuation of woody weed management program and revegetation program at Mitchells Flat.

EXISTING POLICIES, PLANS OR PROGRAMS supporting one or more of the recommended actions:

- FFG Action Statement – Barred Galaxias (65).
- FFG Action Statement – Powerful Owl (92).
- FFG Action Statement – Predation by Cat (80).
- FFG Action Statement – Predation by Red Fox (44).
- FFG Action Statement – Spotted Tree Frog (112).
- FFG Action Statement – Spot-tailed Quoll (15).
- FFG Action Statement – White-bellied Sea-eagle (60).
- Recovery Plan – Barred Galaxias (Raadik 1995).
- Recovery Plan – Spotted Tree Frog 1998-2002 (Gillespie and Robertson 1998).
- The Action Plan for Australian Bats (Duncan *et al.* 1999).
- The Action Plan for Australian Birds 2000 (Garnett and Crowley 2000).
- The Action Plan for Australian Freshwater Fishes (Wager and Jackson 1993).
- The Action Plan for Australian Frogs (Tyler 1997).
- The Action Plan for Australian Rodents (Lee 1995).



White-bellied Sea-Eagle
(Photo: Mike Carter)

7. Jamieson Landscape Zone

7.10 Parks and Reserves (cont'd)

- CAMBA – White-bellied Sea-eagle.
- Goulburn Broken Regional Catchment Strategy Draft (Goulburn Broken CMA 2002).
- Goulburn Broken CMA Draft Native Vegetation Plan, Volume 1 and 2 (Goulburn Broken CMA 2000).
- Victoria's Native Vegetation Management. A framework for Action (NRE 2002a).
- Revegetation Guide for the Goulburn Broken Catchment (Earl *et al.* 2001).
- Lake Eildon National Park Management Plan (NRE 1997d).
- Victorian Recreational Fishing Guide 2002-2003 (NRE 2002e).
- Local Government and Landcare Action Plan for Nature Conservation in the Goulburn-Broken Catchment (Raven 1997).